

What is claimed is:

1. An implantable device comprising:
a sealed housing;
a plurality of electrical components disposed within the housing and including at least one pair of adjacent electrically conductive paths wherein the paths are separated by a distance less than approximately 0.01 inches; and
a gas mixture of at least 1 percent sulfur hexafluoride disposed within the housing.
2. The device of claim 1 wherein the gas mixture includes at least 70 percent sulfur hexafluoride.
3. The device of claim 1 wherein the plurality of electrical components includes a defibrillator.
4. The device of claim 1 wherein the paths are separated by a distance less than approximately 0.004 inches.
5. The device of claim 1 wherein the gas mixture includes at least one of any combination of helium, argon, oxygen and nitrogen.
6. The device of claim 1 wherein the gas mixture is maintained at a pressure greater than one atmosphere.
7. The device of claim 1 wherein the gas mixture is maintained at a pressure greater than 0.1 pounds per square inch gage.

8. The device of claim 1 wherein the gas mixture is maintained at a pressure less than approximately 5.0 pounds per square inch gage.
9. The device of claim 1 wherein the sealed housing includes a welded joint.
10. The device of claim 1 wherein a breakdown voltage between the adjacent electrically conductive paths is greater than approximately 1000 volts.
11. The device of claim 1 wherein a breakdown voltage between the adjacent electrically conductive paths is greater than approximately 1800 volts.
12. A method comprising:
 - assembling a plurality of electrical components in an implantable housing wherein the plurality includes a pair of conductive paths separated by a distance of less than approximately 0.01 inches;
 - introducing a gaseous mixture of at least 1 percent sulfur hexafluoride to an interior of the housing; and
 - sealing the housing to prevent release of the gas mixture.
13. The method of claim 12 wherein introducing the gaseous mixture includes enveloping the plurality of electrical components in an atmosphere of greater than approximately 70 percent sulfur hexafluoride.
14. The method of claim 12 wherein sealing the housing includes welding the housing in an argon atmosphere.
15. The method of claim 12 wherein introducing the gaseous mixture includes:
 - drawing a first vacuum in the housing;
 - injecting a first atmosphere into the housing;

drawing a second vacuum in the housing; and
injecting a second atmosphere into the housing wherein the second atmosphere includes a mixture of helium.

16. The method of claim 15 wherein the first atmosphere differs from the second atmosphere.

17. The method of claim 15 wherein at least one of any combination of injecting the first atmosphere and injecting the second atmosphere includes injecting an atmosphere having greater than approximately 85 percent nitrogen.

18. The method of claim 15 wherein at least one of any combination of injecting the first atmosphere and injecting the second atmosphere includes injecting an atmosphere having greater than approximately 85 percent sulfur hexafluoride.

19. The method of claim 12 further including purging the interior of a contaminant gas.

20. The method of claim 19 wherein purging includes flushing with at least one of any combination of nitrogen and sulfur hexafluoride.

21. The method of claim 12 wherein introducing the gaseous mixture includes introducing at least one of any combination of helium, nitrogen, oxygen and argon.

22. The method of claim 12 wherein assembling the plurality of electrical components includes assembling a defibrillator.

23. The method of claim 12 wherein introducing the gaseous mixture includes pressurizing the housing to a pressure greater than one atmosphere.

24. The method of claim 23 wherein introducing the gaseous mixture includes pressurizing the housing to a pressure greater than approximately 0.1 pounds per square inch gage.

25. The method of claim 23 wherein introducing the gaseous mixture includes pressurizing the housing to a pressure less than approximately 5.0 pounds per square inch gage.

26. An implantable device comprising:
a sealed housing;
a plurality of electrical components disposed within the housing and including at least one pair of adjacent electrically conductive paths wherein the paths are separated by a distance less than approximately 0.01 inches; and
a gas mixture having a dielectric constant greater than unity disposed within the housing.

27. The device of claim 26 wherein the gas mixture includes greater than 1 percent sulfur hexafluoride.

28. The device of claim 26 wherein the gas mixture is maintained at a pressure greater than 0.1 pounds per square inch gage.

29. The device of claim 26 wherein the gas mixture is maintained at a pressure greater than 5.0 pounds per square inch gage.